

angulatâ; valvulis subcrassis; natibus subelevatis, ad apices minutè undulatis; epidermide luteolâ, striatâ; dentibus cardinalibus permagnis, subcompressis, elevatis, obliquis crenulatisque; lateralibus longis rectisque; margaritâ argenteâ et iridescente.

Hab. Rutersville, Texas. Prof. C. G. Forshey.

UNIO HOUSTONENSIS.—Testâ lævi, subrotundâ, subinflatâ, æquilaterali, ad latere paulisper plauulatâ; valvulis subcrassis, anticè crassioribus; natibus elevatis, ad apices paulisper undulatis; epidermide lævi, virido-luteâ, vel radiatâ vel obsolete radiatâ; dentibus cardinalibus magnis, erectis, crenulatis; lateralibus curtis subrectisque; margaritâ argenteâ et iridescente.

Hab. Houston, Texas. F. Moore, M. D.

UNIO RUTERSVILLENSIS.—Testâ lævi, transversè ellipticâ, subinflatâ, valde inæquilaterali, posticè obtusè angulatâ; valvulis subtenuibus, anticè paulisper crassioribus; natibus prominulis, ad apices regulariter et elegantissimè undulatis; epidermide vel fuscâ vel luteo-fuscâ et valde radiatâ; dentibus cardinalibus parvis, compressis, acuminatis, crenulatis, in utroque valvulo duplicibus; lateralibus longis, lamellatis subcurvisque; margaritâ ceruleo-albâ et valde iridescente.

Hab. Rutersville, Fayette Co., Texas. Prof. C. G. Forshey.

UNIO FORSHEYI.—Testâ valde et minutè tuberculatâ, subquadrangulari, compressâ, subæquilaterali, posticè subbiangulatâ; valvulis subcrassis, anticè crassioribus; natibus subelevatis, ad apices acuminatis et elegantissimè perundulatis; epidermide virido-luteâ, substriatâ, obsolete radiatâ, submicante; dentibus cardinalibus subgrandibus, erectis, crenulatis, in utroque valvulo duplicibus, lateralibus rectis brevibusque; margaritâ argenteâ et paulisper iridescente.

Hab. Fayette Co., Texas. Prof. C. G. Forshey.

Description of a Third Genus of **HEMIRHAMPHINÆ.**

BY THEO. GILL.

After the transmission to the Academy of Natural Sciences of the paper descriptive of the genus *Hyporhamphus*, Mr. James C. Brevoort placed in my hands a species closely resembling those fishes which have been described as *Hemirhamphus longirostris* and *H. macrorhynchus*. Mr. Brevoort at the same time called my attention to the peculiar dentition of the species, there being evidently tricuspidate teeth in the lower jaw, while those in the upper were simply conical. On an examination of the descriptions of the above mentioned species, as given in the "Histoire Naturelle des Poissons," it is to be remarked that no allusion is made to the *shape* of the teeth, but that they are in each described as being very fine, immediately after the statement of the size of the upper jaw. It is then to be presumed that M. Valenciennes only noticed the conical teeth, for one of the characters that he has given of the genus is founded on the presence of granular or conical ones. Could Valenciennes have overlooked the teeth of the lower jaw, and only examined those of the upper? It appears to me possible that he did, for it is scarcely to be believed that a fish so closely resembling *Hemirhamphus longirostris* as the present species, could differ from it in such important parts. I nevertheless offer this opinion with diffidence. As Valenciennes has remarked, the teeth are very small, and as their forms can only be discerned through a magnifier, they might have been easily overlooked, unless the attention of the observer was particularly attracted to them. The peculiarity of the different structure of the teeth in each jaw would scarcely have been suspected by the naturalist as occurring in this tribe. If this supposition is correct, as to the *Hemirhamphus longirostris* and *H. macrorhynchus*, those species should be withdrawn from the genus *Hemirhamphus* and placed in an allied one. Valenciennes would probably have himself done this, if he had

1859.]

been aware that any such peculiarity as that signalized had existed. Certain it is, that the species to be now described differs from *Hemirhamphus*, not only in the dentition, but even more strikingly in general form, which at once distinguishes it from that genus, as it should be restricted, and approximates it to the long billed and slender *Hemirhamphus longirostris*. In the typical *Hemirhamphi* the body, although elongated and nearly uniform, is quite robust. In the present genus (*Euleptorhamphus*) the proportional height is about half of that in *Hemirhamphus*, and the beak is also much elongated. The pectorals are again much longer than those of *Hemirhamphus*, and are pointed at their extremities, and they have been even compared by Valenciennes to those of the *Exocoeti*. These characters sustain us in the belief that it forms the type of a natural genus, and we now give its *generic* characters, those appertaining to the subfamily being omitted.

EULEPTORHAMPHUS Gill.

Body very slender and elongated, covered with large and high scales. The ensiform, lower jaw, very long and slender, greatly exceeding the length of the head. Teeth very small and panciserial in each jaw, tricuspidate in the lower and subconical in the upper. Pectoral fins elongated and pointed. Anal with all its rays, except the most anterior, simply branched.

EULEPTORHAMPHUS BREVOORTII Gill.

The height between the vertical fins is contained between twelve and thirteen times in the length from the opercular margin to the base of the caudal fin. The head, from the end of the upper jaw to the margin of the operculum bears a proportion to the length of the trunk of one to six and a third. The beak forms about three-tenths of the *extreme length* inclusive of the caudal fin.

The eye is moderate, its diameter forming little, if at all, more than a fourth of the head's length (exclusive of the beak). The interorbital space is equal to a diameter. The pectorals slightly exceed three-elevenths of the length of the trunk. The ventrals are nearer to the margin of the operculum than to that of the caudal fin, and are very small, their length only equalling a sixth of the pectorals. The dorsal commences nearer to the point of the caudal than to the bases of the pectorals; its base is about as long or even longer than the length of the pectorals; about three of its rays are in advance of the anal, and its last ray is above or a little behind that of the same fin.

In the number of rays this species does not differ essentially from its congeners.

D 22; A 22; C 3, I, 8, 9, I, 5; P 8; V 6.

The scales appear to be firmly adherent to the body, especially on the silvery portion. The color is tawny-yellow on the back and inferiorly on the tail; the head and the rest of the sides are brilliant silvery; the silvery band is quite straight above; the beak is light or tawny-brown.

It appears that *Euleptorhamphus Brevoortii* is consequently more nearly allied to *E. longirostris* of Cuvier than to the *E. macrorhynchus*, the former offering no important difference in its relative height, which is said to be comprised thirteen times in the trunk, measured from the operculum to the root of the tail; in *E. macrorhynchus* the height is not comprised much more than nine times in the same length. With the latter, it is therefore unnecessary to compare the present species; from the former, it appears to differ specifically in some of its proportions. The beak in *E. longirostris* is said to be a quarter of the entire length; in *E. Brevoortii* it is three-tenths, or a little less than a third, and is consequently almost as long proportionally as *E. macrorhynchus*. The eye in *E. longirostris* is a third of the head's length in diameter; in *E. Brevoortii* it is only a quarter. The other variations in dimensions would not be sufficient to specifically distinguish the two fishes, but as they do not very widely differ in size, the variations that have been stated appear to be specific and not the results of

[May,

age. Valenciennes says that the scales of *E. longirostris* appeared to him to fall easily. The scales of *E. Brevoortii* appear to me to be more than usually adherent. If we are both correct, this difference will be important as specific. The two fishes finally appear to differ in color, but the one that has been above described has been apparently long preserved in alcohol.

The habitat of this species is unknown; the species allied to it have been hitherto found only in the Oriental seas.

ICHTHYOLOGICAL NOTICES.

BY CHARLES GIRARD, M. D.

LX. A species of *Fundulus*, closely allied to *F. grandis*, and of which we have given a good figure of either sex, on Plate xxxvi of the "Ichthyology of the United States and Mexican Boundary," was recently collected in Charlotte Bay, Fla., and sent to the Smithsonian Institution.

The specimens obtained are of the male sex, the largest one measures four inches and a half in total length, the head forming a little more than the fourth of it. The eye is large and circular, the diameter of the orbit entering about four times in the length of the side of the head. The maxillary teeth are rather small and inconspicuous. The body has not the plump appearance of *F. grandis*; its greatest depth is less than the fourth of the total length. The dorsal and anal fins are narrower than in *F. grandis*. The anterior margin of the anal is nearer the posterior margin of the caudal than the apex of the snout; that of the anal is equidistant between the pupil and the margin of the caudal. The latter is rounded off or subtruncated. The anal is inserted somewhat more anteriorly with reference to the dorsal than in *F. grandis*, and the tips of the rays of the dorsal project a little further than those of the anal fin. The ventrals are possibly smaller than in *F. grandis*, their extremities not reaching quite the vent. The pectorals are of moderate size and extend as far back as a vertical line drawn at the origin of the ventrals. The rays are:—D 12; A 11; C 2, 1, 8, 8, 1, 2; V 6; P 1, 16. The scales are deeper than long, but proportionally less so than in *F. grandis*. The head, dorsal region and flanks are blackish brown, metallic white spots being scattered over the sides of the body and tail. The abdomen is yellowish white. The dorsal, caudal, and anal fins olivaceous, checkered with black and white, the ventrals and pectorals being olivaceous.

The name of *Fundulus floridensis* is bestowed upon this species.

LXI. We owe to our friend Dr. Thomas Webb, a species of *Cyprinodon*, collected by him in the neighborhood of San Diego, Cal., while attached to the U. S. and Mexican Boundary, under ex-Commissioner R. R. Bartlett.

It may easily be distinguished from its congeners in North America, by its uniform system of coloration which exhibits neither bands nor spots. The general aspect of its body is rather short and deep, except in the young which assume a subfusiform appearance. The largest specimens which we have examined measure about an inch and a half in total length. The head constitutes the fourth of the length, the snout being abruptly rounded off. The mouth is, proportionally speaking, of medium size; whilst the eye is rather small, subcircular; its diameter entering three times and a half in the length of the side of the head. The dorsal fin is higher than long, and superiorly convex; its anterior margin being nearer the apex of the snout than the posterior margin of the caudal. The anal fin is nearly as large as the dorsal, deeper than long, inferiorly convex, particularly upon its posterior half. The caudal is posteriorly truncated, nearly linear. The ventrals are small, project beyond the vent and reach almost the origin of the anal. The pectorals are well developed, rounded off, extending as far as a vertical line drawn at the insertion of the ventrals. The rays are:—D 10 + 1; A 11; C 3, 1, 8, 8, 1, 3; V 7; P 12.—The